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1-28-2019

## 2018 Insecticide Evaluation for Soybean Aphid

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Hodgson, Erin W., "2018 Insecticide Evaluation for Soybean Aphid" (2019). *Integrated Crop Management News*. 2515.  
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# 2018 Insecticide Evaluation for Soybean Aphid

## **Abstract**

Plots were established at two locations in 2018 (ISU Northwest Research Farm and ISU Northeast Research Farm). Syngenta NK S24-K2 brand soybean was used at both locations. Seven insecticidal groups/subgroups were evaluated in 2018. Seed did not have a pesticidal seed treatment unless specifically stated. At both locations, soybean aphid peaked in August (four perplant at Northeast Research Farm and 22 perplant at Northwest Research Farm). The economic threshold was not reached at either location in 2018; however, all plots were sprayed mid-August.

## **Disciplines**

Agricultural Science | Agriculture

# IOWA STATE UNIVERSITY

## Extension and Outreach

Integrated Crop Management

# 2018 Insecticide Evaluation for Soybean Aphid

January 28, 2019

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## Project Description

Plots were established at two locations in 2018 (ISU Northwest Research Farm and ISU Northeast Research Farm). Syngenta NK S24-K2 brand soybean was used at both locations. Seven insecticidal groups/subgroups were evaluated in 2018. Seed did not have a pesticidal seed treatment unless specifically stated. At both locations, soybean aphid peaked in August (four perplant at Northeast Research Farm and 22 perplant at Northwest Research Farm). The economic threshold was not reached at either location in 2018; however, all plots were sprayed mid-August.

## Summary

The cumulative aphid days (CAD), or seasonal exposure for plots ranged from 200 to 2,700 at the Northwest Research Farm. Most of the CAD was accumulated in late August and early September, and did not affect yield among treatments. Yield ranged from 71-81 bushels per acre at the Northwest Research Farm, but the yield variability is not likely due to soybean aphid since the CAD levels were well below the economic injury level.

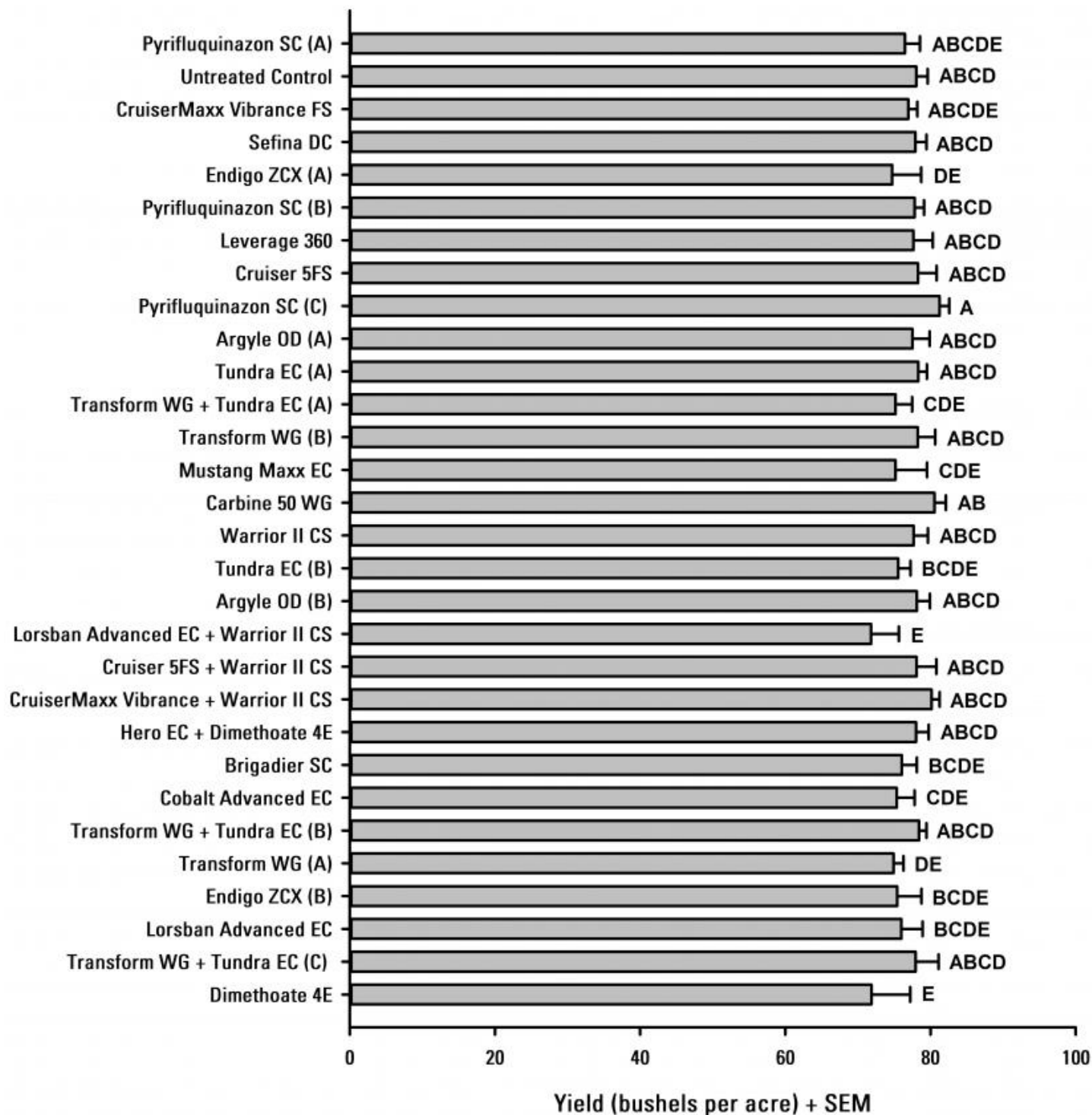


Figure 1. Mean separation of yield + standard error the mean for treatments at the ISU Northwest Research Farm in 2018. Means with a unique letter are significantly different at alpha = 0.10 ( $P = 0.5277$ ;  $F = 0.96$ ;  $df = 29, 3$ ).

## Management Recommendations

Population fluctuations between locations and years is typical for soybean aphid in Iowa. Pyrethroid resistance has been confirmed in northern Iowa, but is not widely confirmed throughout the state. My recommendation for soybean aphid management in Iowa is to:

- Plant early if the field is in an area with persistent soybean aphid populations.
- Scout for soybean aphid, especially during R1–R5, and use a foliar insecticide if aphids exceed the economic threshold of 250 per plant.
- Use a product labeled for soybean aphid; most well-timed applications of foliar insecticides will protect yields if applied at the economic threshold and coverage is sufficient.
- Evaluate foliar insecticide efficacy three days after application to ensure soybean aphid populations were sufficiently reduced.
- Understand that late-season accumulation of CAD (i.e., after R5) may not impact yield like it does during early reproductive growth; a foliar insecticide applied after seed set may not be an economically profitable choice.

**Download the full summary of the 2018 efficacy evaluation for soybean aphid at the ISU Extension Store.**

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**Category:** Insects and Mites

**Crop:**

Soybean

**Tags:** aphid Soybean IPM insecticides

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Dr. Erin Hodgson started working in the Department of Entomology at Iowa State University in 2009. She is an associate professor with extension and research responsibilities in corn and soybeans. She has a general background in integrated pest management (IPM) for field crops. Dr. Hodgson's curre...